

What is claimed is:

1. A wearable device comprising:

one or more circuit substrates comprising electrically conductive parts being disposed in at least a first plane;

5 a radio unit operating at a radio frequency; and

a loop antenna coupled to the radio unit, the loop antenna comprising a conductor formed into a loop defining an area and being disposed in a second plane; wherein the electrically conductive parts of at least one of said one or more circuit substrates substantially act as a ground plane causing a ground plane effect for the loop antenna and wherein said first plane is substantially coplanar with said second plane and such that at least the electrically conductive parts of said at least one circuit substrate are within said area defined by the loop when observed in plan view minimizing the ground plane effect of the electrically conductive parts of said at least one circuit substrate on the loop antenna.

2. The wearable device of claim 1, wherein the radio unit is mounted on one of said one or more circuit substrates.

3. The wearable device of claim 1, wherein said at least one circuit substrate is positioned entirely within the area defined by the loop, when said at least one circuit substrate and the loop are observed perpendicularly with respect to the second plane.

4. The wearable device of claim 1, wherein the loop antenna is formed on the periphery of said at least one circuit substrate.

5. The wearable device of claim 1, wherein the loop antenna is coupled to the radio unit via a balancing means.

6. The wearable device of claim 5, wherein the balancing means comprises a balancing transformer.

7. The wearable device of claim 5, wherein the balancing means comprises a balanced transmission line.

8. The wearable device of claim 1, wherein said at least one circuit substrate and the second plane have a maximum vertical distance of about 0.1 times a wave length corresponding to the radio frequency that the radio unit operates at wherein the vertical distance is measured perpendicular to the second plane.

9. The wearable device of claim 1, wherein the loop antenna is coupled to the radio unit via a balancing means at two separate points located

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substantially 90° apart from each other on the conductor loop of the loop antenna with respect to the center of the conductor loop in order to enable the use of circular polarization.

5        10. The wearable device of claim 9, wherein the balancing means comprises a balancing transformer.

      11. The wearable device of claim 9, wherein the balancing means comprises a balanced transmission line.

10       12. The wearable device of claim 1, wherein the length of the conductor of the loop antenna is substantially equal to a wavelength corresponding to the radio frequency that the radio unit operates at.

      13. The wearable device of claim 1, wherein said at least one circuit substrate is a printed circuit board.

      14. The wearable device of claim 1, wherein the radio unit comprises a radio receiver and/or a radio transmitter.

15       15. The wearable device of claim 14, wherein the radio unit comprises a GPS receiver.

      16. The wearable device of claim 1, wherein the wearable device comprises a display unit.

20       17. The wearable device of claim 1, wherein the wearable device comprises a watch circuit.

      18. The wearable device of claim 1, wherein the wearable device comprises a computer.

      19. The wearable device of claim 1, wherein the wearable device comprises a wrist watch type housing of electrically non-conducting material.